



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/589,612

08/16/2006

Tamie Oyanagi

28951.5496

8662

53067 7590 08/29/2008

STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVE., NW
WASHINGTON, DC 20036

EXAMINER

ELBIN, JESSE A

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

08/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,612	Applicant(s) OYANAGI, TAMIE	
	Examiner JESSE A. ELBIN	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>16 August 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

Art Unit: 2614

double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,115,479.

Although the conflicting claims are not identical, they are not patentably distinct from each other because adjusting the concentration of flame retardant in a wax base is well within one of ordinary skill in the art's skill, with a minimal amount of experimentation, to attain a desired flame retardance, and mechanical strength. Further, the differences in the claims between the Instant Application and Patent 6,115,479 are all known in the art, or rendered obvious in view of the prior art of record as described in the art rejections below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuzawa et al. (US Patent 6,115,479 ('479)) in view of Applicant's admitted prior art in view of Asano (US PGPub 2001/0007888 ('888)).

Regarding claim 1, Okuzawa teaches a loudspeaker copper foil wire ('479 abstract) comprising a copper foil wire body ('479 Fig. 1 #8-9) impregnated or coated with a flame resistant wax ('479 col. 2 lines 48-51 and Fig. 1), the flame resistant wax comprising a petroleum paraffin wax ('479 col. 2 lines 52-53) and 5 wt % to 50 wt % of a halogen-free aromatic condensation phosphoric ester flame retardant ("phosphoric ester flame retardant"; '479 col. 2 lines 54-55).

Okuzawa does not explicitly teach the flame retardant being a halogen-free aromatic condensation phosphoric ester flame retardant, nor the concentration of the flame retardant being 5 wt% to 50 wt%.

Applicant admits that halogen-free aromatic condensation phosphoric ester flame retardant is known in the art and is commercially available under the product number PX-200 from Daihachi Chemical Industry Co., Ltd. (page 7 paragraph 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a halogen-free flame retardant in the loudspeaker wire taught by Okuzawa for the benefit of reducing the environmental impact of using halogenated compounds in manufacturing.

Neither Okuzawa, nor Applicant's admitted prior art explicitly teach the concentration of flame retardant being 5 wt% to 50 wt%.

Addressing the same problem as the inventor, Asano teaches creating a flame retardant resin composition comprising non-halogen flame retardant ('888 abstract) in a concentration of 1 to 60 parts by weight ('888 [0064]). Asano further teaches the concentration of flame retardant will result in acquiring a desired flame retardance ('888 [0040] last 2 lines).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a concentration of flame retardant in the range of 5 wt% to 50 wt % as taught by Asano in the loudspeaker wire taught by the combination of Okuzawa and Applicant's admitted prior art.

Regarding claim 2, Okuzawa, Applicant's admitted prior art and Asano remain as applied above.

Applicant's admitted prior art further teaches the halogen-free aromatic condensation phosphoric ester flame retardant (i.e. PX-200) has a melting point of 80°C to 140°C and a decomposition temperature of not lower than 250°C (page 7, second paragraph, lines 11-14).

Regarding claim 3, Okuzawa, Applicant's admitted prior art and Asano remain as applied above.

Okuzawa further teaches the copper foil wire body includes a plurality of core threads ('479 Fig. 1 #8) each wrapped with a copper foil ('479 Fig. 1 #9) and braided or stranded ('479 col. 2 line 44).

Regarding claim 4, Okuzawa, Applicant's admitted prior art and Asano remain as applied above.

Applicant's admitted prior art further teaches a magnetic circuit (Fig. 2 #1); a frame (Fig. 2 #2) mounted on the magnetic circuit (page 1, paragraph 5, line 1); a voice coil (Fig. 2 #6) fitted in a magnetic gap of the magnetic circuit (page 1, paragraph 5, lines 2-3); a vibration diaphragm (Fig. 2 #3) having an inner rim connected to the voice coil and an outer rim connected to the frame (page 1, paragraph 5, lines 4-7); an external connection terminal (Fig. 2 #5) attached to the frame (page 1, paragraph 5, lines 7-9); and a pair of copper foil wires (Fig. 2 #7) connected to opposite ends of the voice coil at one-side ends thereof and connected to the external connection terminal at the other-side ends thereof (page 1, paragraph 6 lines 1-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the heat-resistant wire taught by the combination of Okuzawa, Applicant's admitted prior art, and Asano in the prior art speaker, described by Applicant for the benefit of creating a speaker capable of being driven with higher power.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Okuzawa et al. (US Patent 6,219,433) teaches mixing a flame retardant with a petroleum wax, and coating a loudspeaker wire.

Art Unit: 2614

- b. Taniguchi et al. (US PGPub 2003/0166812) teaches a flame retardant resin and benefits of using non-halogenated flame retardants.
- c. Geisenberger (US Patent 5,602,931) teaches a connection line for a loudspeaker which is temperature-stable above 250°C.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSE A. ELBIN whose telephone number is (571)270-3710. The examiner can normally be reached on Monday through Friday, 8:00am to 5:00pm EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Suhan Ni can be reached on (571) 272-7505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. A. E./
Examiner, Art Unit 2615

/Suhan Ni/
Primary Examiner, Art Unit 2614